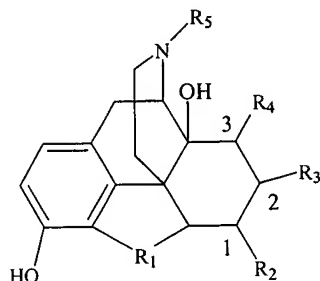


# WHAT IS CLAIMED:

1. A composition of matter comprising:



5

wherein

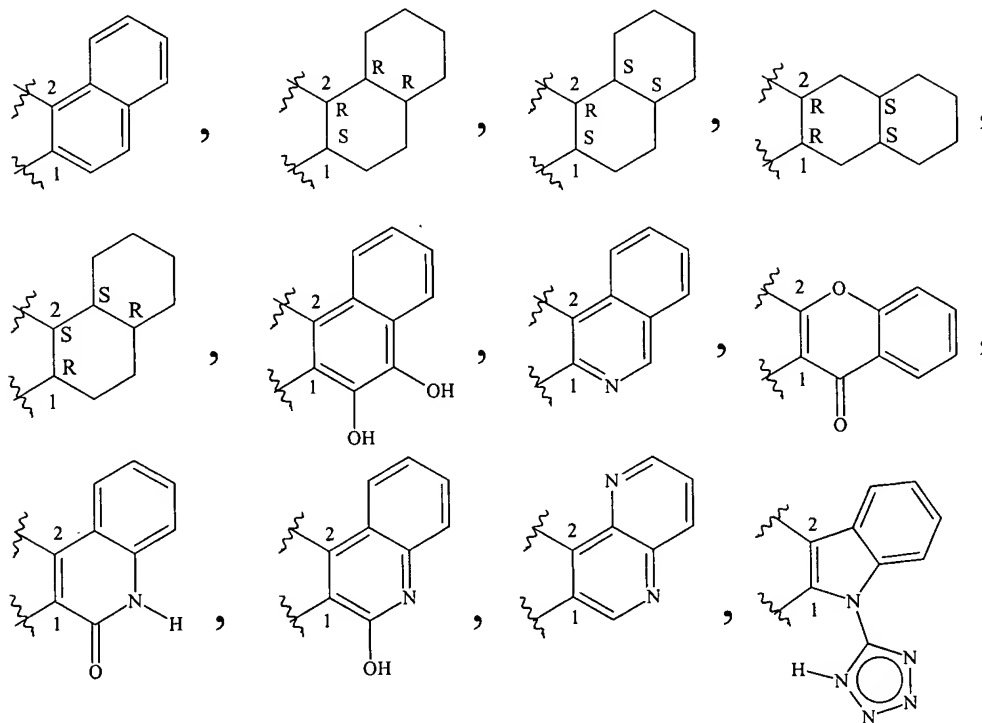
R<sub>1</sub> is O, NH, NR<sub>6</sub>, S, SH, or SR<sub>6</sub>;

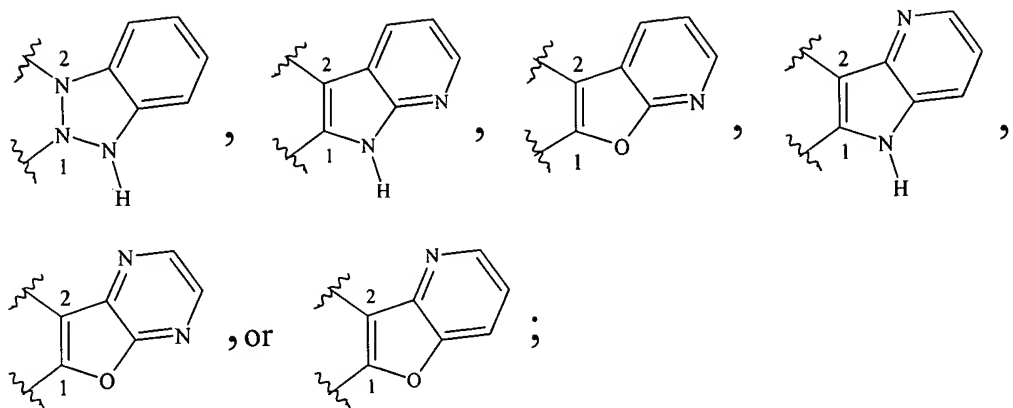
R<sub>2</sub> is H, =O, *t*-butyl, phenoxy, diphenylamine, thiophenyl, phenyl, or cyclohexane;

10

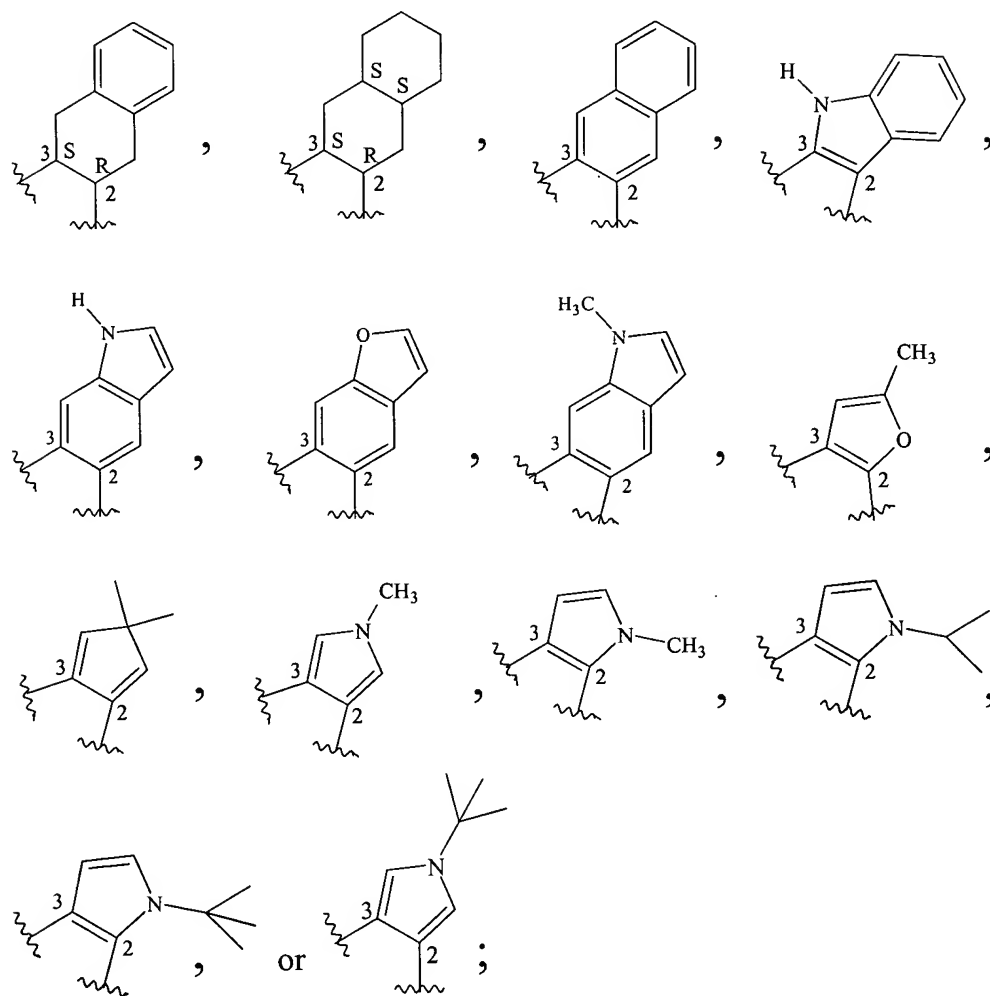
R<sub>3</sub> is phenyl or phenoxy;

wherein R<sub>2</sub> and R<sub>3</sub> comprise a ring system selected from:





or wherein  $R_3$  and  $R_4$  comprise a ring system selected from:



or

R<sub>4</sub> is H or *t*-butyl; and

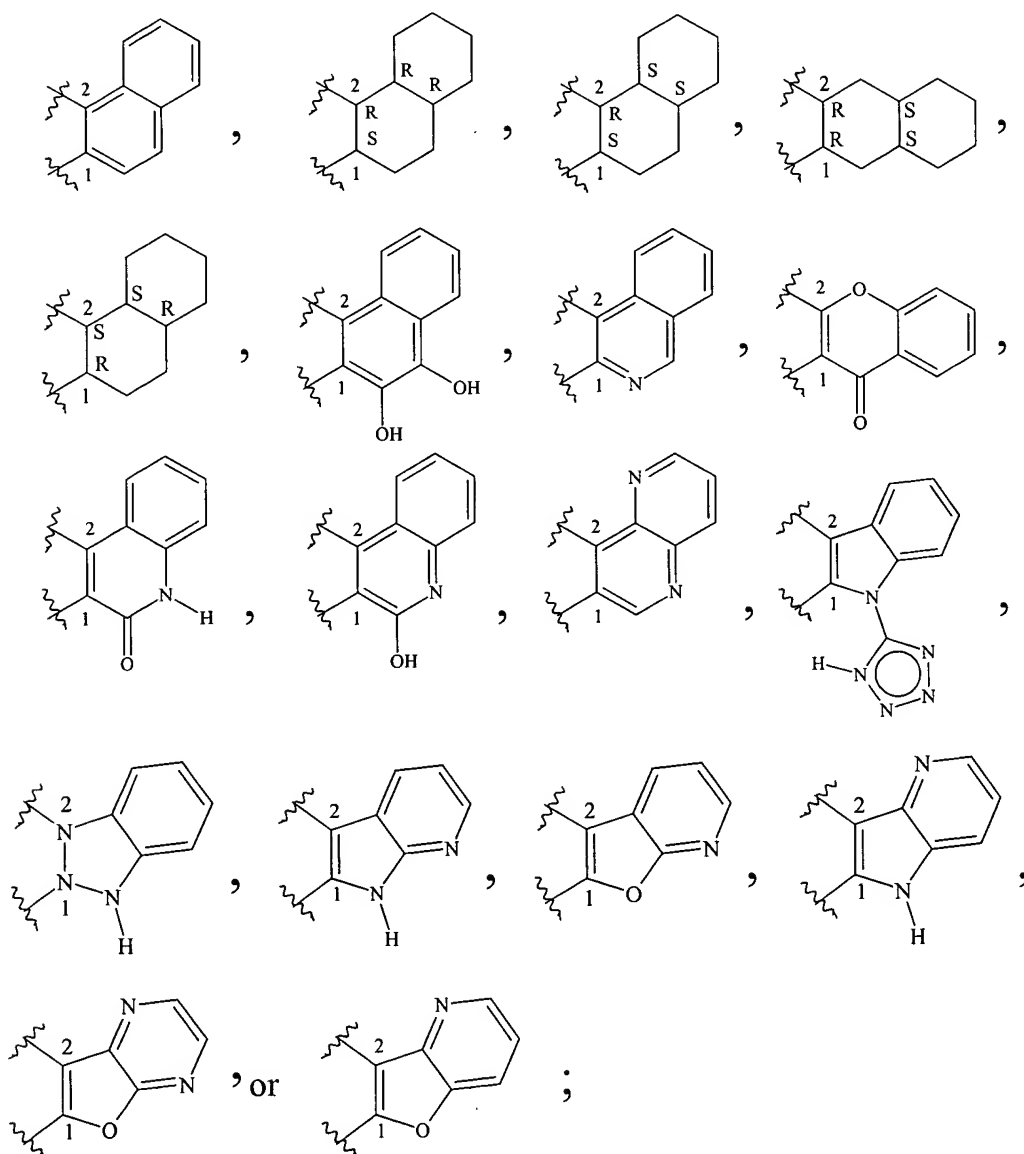
R<sub>5</sub> is CH<sub>3</sub>, methylcyclopropane, a linear alkyl, a branched alkyl, a substituted alkyl, or a substituted branched alkyl;

R<sub>6</sub> is H, CH<sub>3</sub>, a linear alkyl, a branched alkyl, a substituted alkyl, or a substituted branched alkyl; or  
a pharmaceutically acceptable salt thereof.

2. The composition of claim 1, wherein

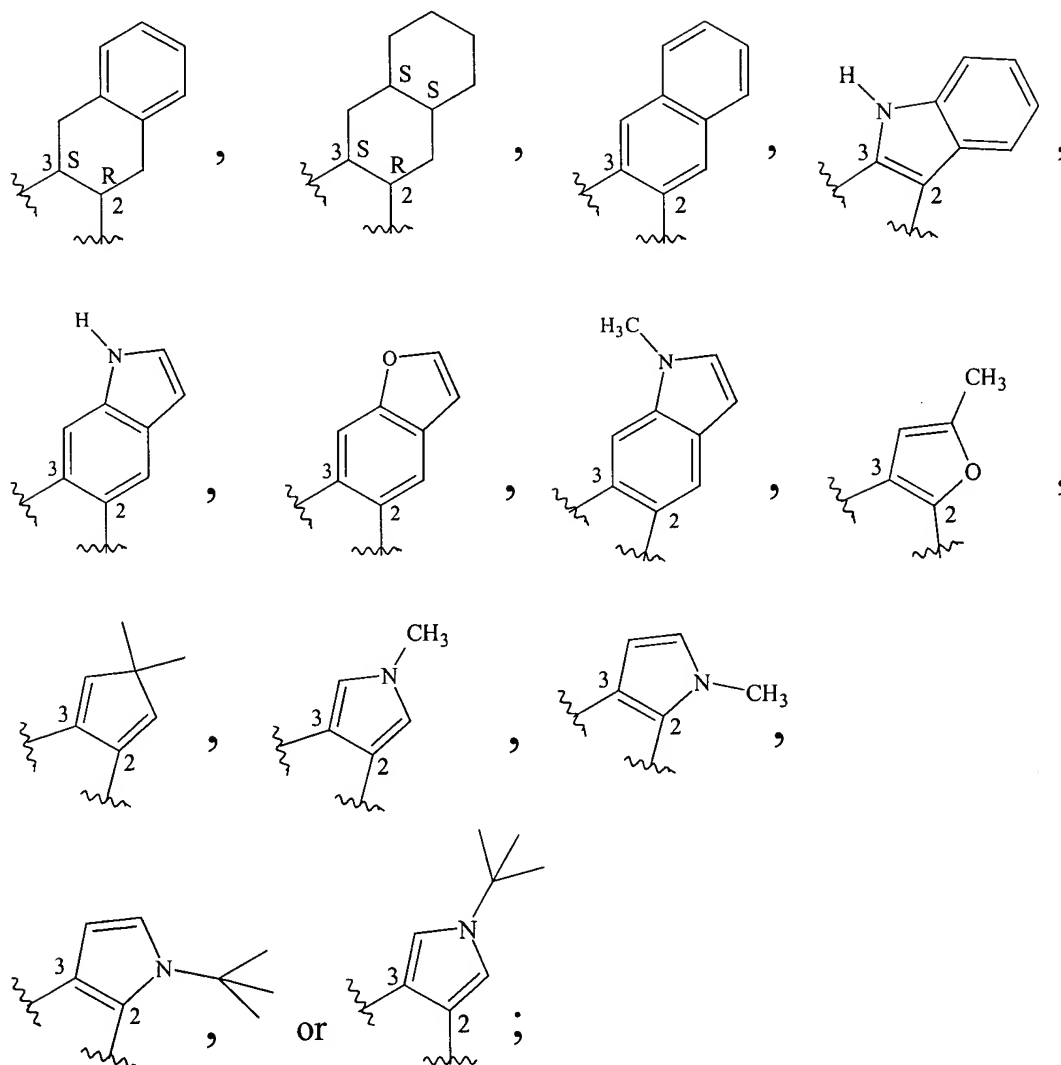
R<sub>1</sub> is O, or NH;

R<sub>2</sub> and R<sub>3</sub> comprise a ring system selected from:



$R_4$  is H;  
 $R_5$  is methylcyclopropane; or  
 or a pharmaceutically acceptable salt thereof.

- 5    3.    The composition of claim 1, wherein  
 $R_1$  is O, or NH;  
 $R_2$  is =O;  
 $R_3$  and  $R_4$  comprise a ring system selected from:



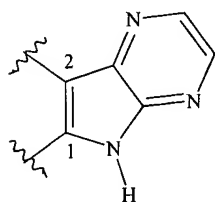
10     $R_5$  is methyl; or

a pharmaceutically acceptable salt thereof.

4. The composition of claim 1, wherein  
R<sub>1</sub> is O, or NH;  
5 R<sub>2</sub> is H, or =O;  
R<sub>3</sub> is phenyl or phenoxy;  
R<sub>4</sub> is H or *t*-butyl; and  
R<sub>5</sub> is CH<sub>3</sub>, methylcyclopropane, a linear alkyl, a branched alkyl, a substituted  
alkyl, or a substituted branched alkyl;  
10 or a pharmaceutically acceptable salt thereof.

5. The composition of claim 4, wherein R<sub>5</sub> is CH<sub>3</sub> or methylcyclopropane.

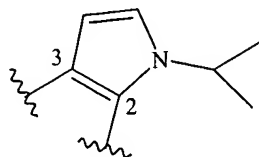
6. The composition of claim 1, wherein  
15 R<sub>1</sub> is O, or NH;  
R<sub>4</sub> is H;  
R<sub>5</sub> is methyl; and  
R<sub>2</sub> and R<sub>3</sub> comprise:



or a pharmaceutically acceptable salt thereof.

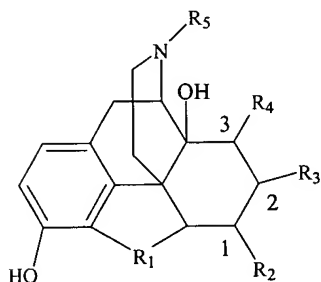
20

7. The composition of claim 1, wherein  
R<sub>1</sub> is O, or NH;  
R<sub>2</sub> is =O;  
R<sub>3</sub> and R<sub>4</sub> comprise:



R<sub>5</sub> is methylcyclopropyl; or  
a pharmaceutically acceptable salt thereof.

8. A pharmaceutical composition comprising a compound according to claim 1 and  
5 a pharmaceutically acceptable carrier.
9. A pharmaceutical composition comprising a compound according to claim 7 and  
a pharmaceutically acceptable carrier.
10. A method for treating disease mediated by the  $\delta$ -opioid receptor comprising  
10 administering an effective amount of a compound of the formula:



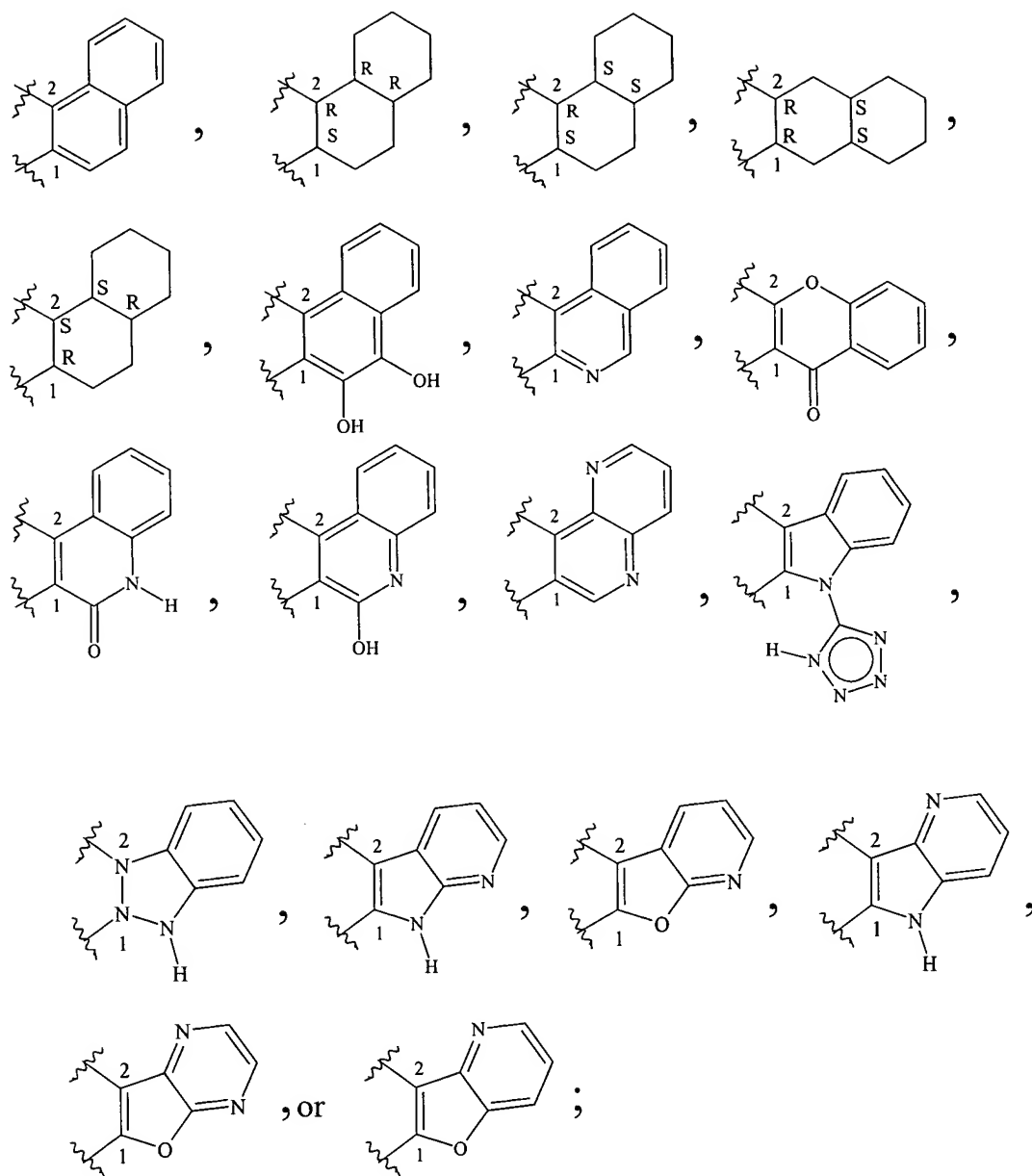
wherein

R<sub>1</sub> is O, NH, NR<sub>6</sub>, S, SH, or SR<sub>6</sub>;

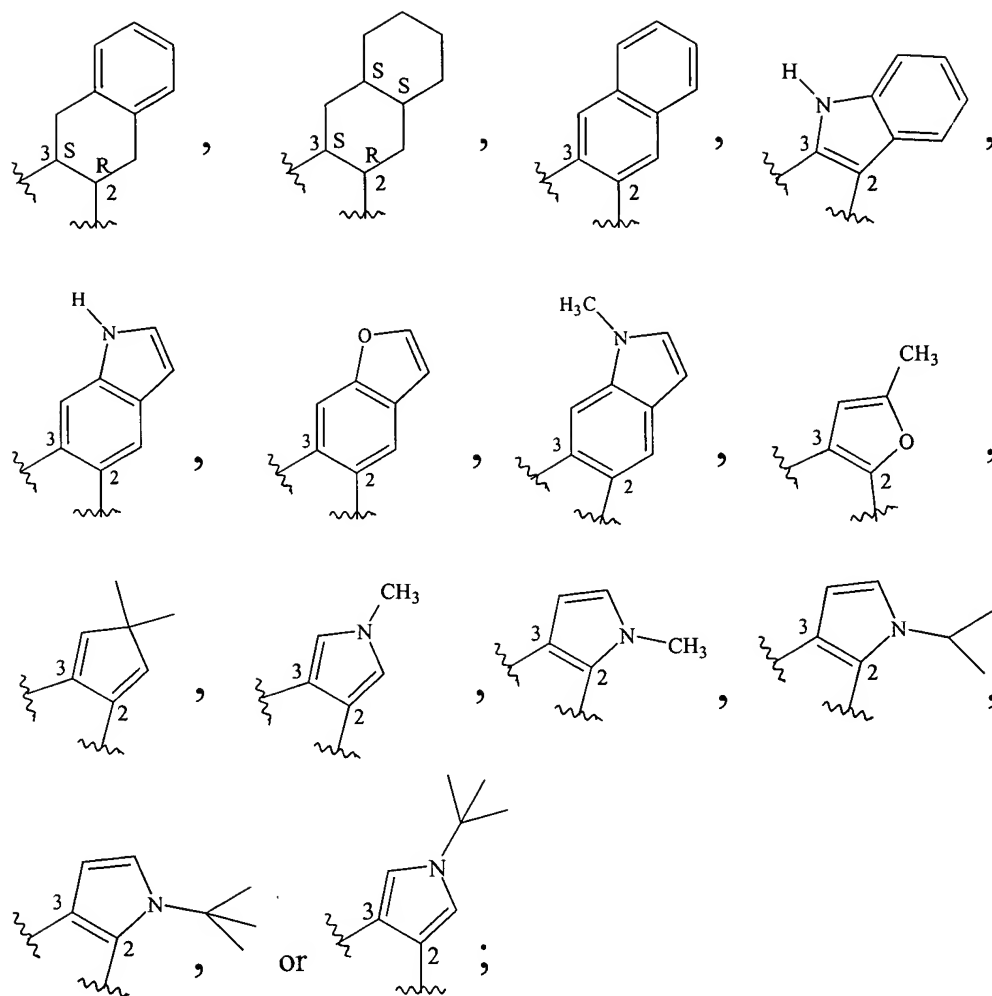
15 R<sub>2</sub> is H, =O, *t*-butyl, phenoxy, diphenylamine, thiophenyl, phenyl, or cyclohexane;

R<sub>3</sub> is phenyl or phenoxy;

or wherein R<sub>2</sub> and R<sub>3</sub> comprise a ring system selected from:



or wherein  $R_3$  and  $R_4$  comprise a ring system selected from:



R<sub>4</sub> is H or *t*-butyl; and

R<sub>5</sub> is CH<sub>3</sub>, methylcyclopropane, a linear alkyl, a branched alkyl, a substituted alkyl, or a substituted branched alkyl;

R<sub>6</sub> is H, CH<sub>3</sub>, a linear alkyl, a branched alkyl, a substituted alkyl, or a substituted branched alkyl; or

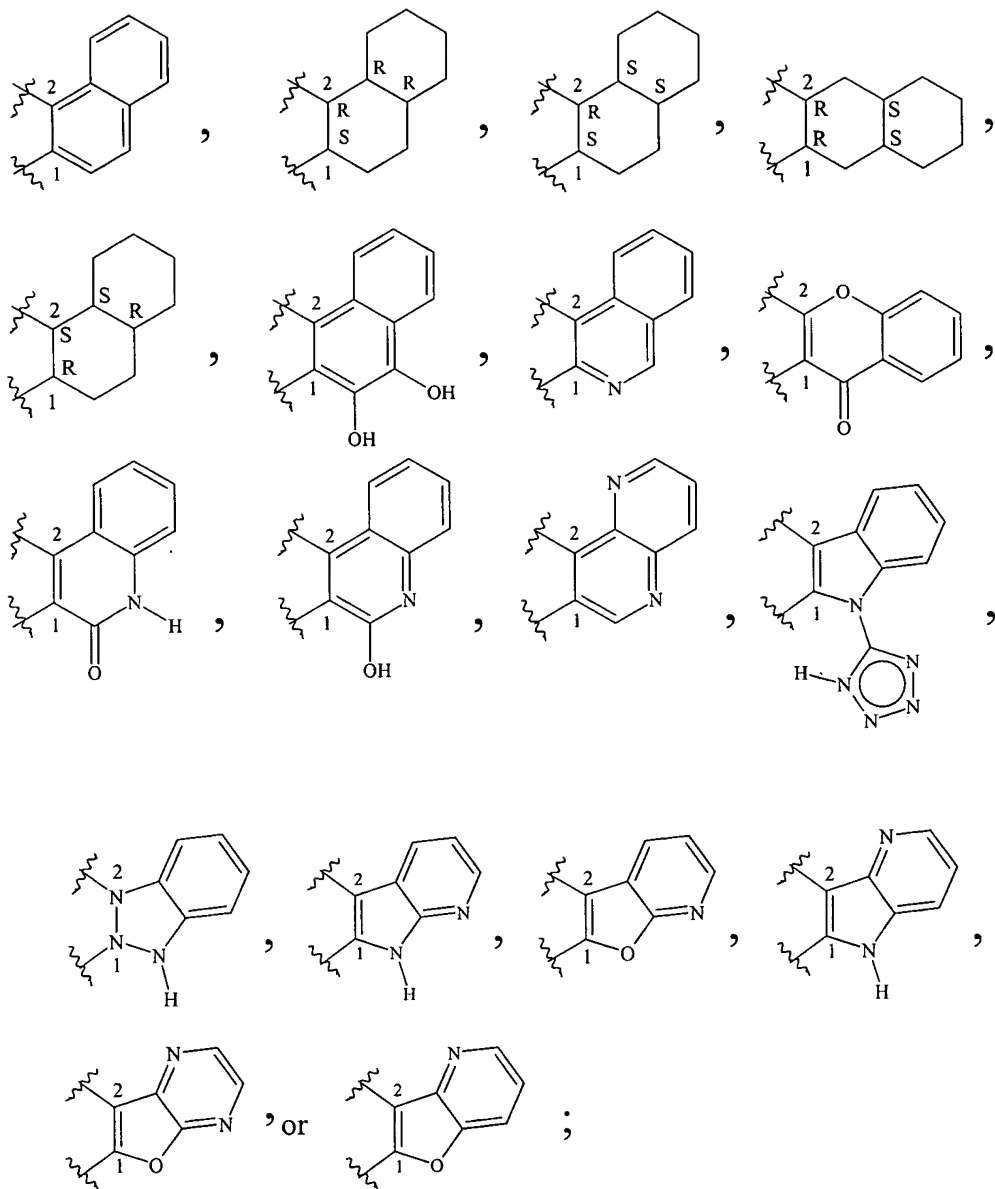
a pharmaceutically acceptable salt thereof.

10 11. The method of claim 10 wherein:

R<sub>1</sub> is O, or NH;

R<sub>2</sub> and R<sub>3</sub> comprise a ring system selected from:





R<sub>4</sub> is H;

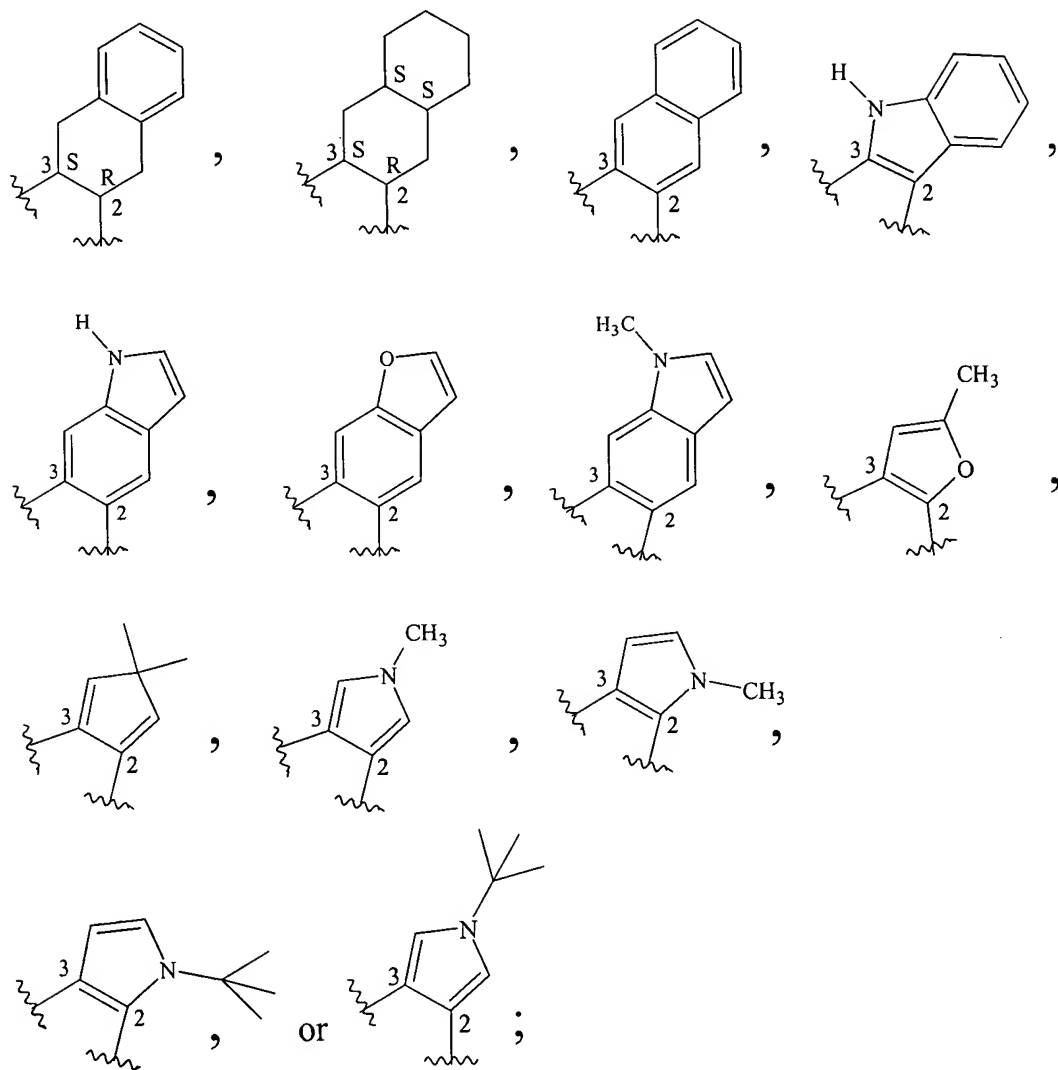
- 5 R<sub>5</sub> is methylcyclopropane; or  
a pharmaceutical acceptable salt thereof.

12. The method of claim 10 wherein:

R<sub>1</sub> is O, or NH;

R<sub>2</sub> is =O;

R<sub>3</sub> and R<sub>4</sub> comprise a ring system selected from:



5 R<sub>5</sub> is methyl; or  
a pharmaceutically acceptable salt thereof.

13. The method of claim 10 wherein:

R<sub>1</sub> is O, or NH;

10 R<sub>2</sub> is H, or =O;

R<sub>3</sub> is phenyl or phenoxy;

R<sub>4</sub> is H or *t*-butyl; and

R<sub>5</sub> is CH<sub>3</sub>, methylcyclopropane, a linear alkyl, a branched alkyl, a substituted alkyl, or a substituted branched alkyl; or  
a pharmaceutically acceptable salt thereof.

5

14. The method of claim 10, wherein R<sub>5</sub> is CH<sub>3</sub> or methylcyclopropane.

15. The method of claim 10, wherein R<sub>1</sub> is NH or O.

10 16. The method of claim 10, wherein R<sub>2</sub> is =O.

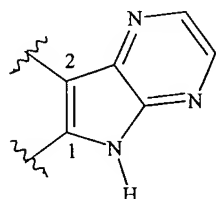
17. The method of claim 10, wherein

R<sub>1</sub> is O, or NH;

R<sub>4</sub> is H;

15 R<sub>5</sub> is methyl; and

R<sub>2</sub> and R<sub>3</sub> comprise:



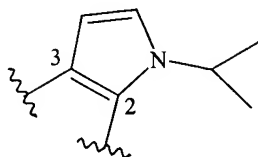
or a pharmaceutically acceptable salt thereof.

18. The method of claim 10, wherein

20 R<sub>1</sub> is O, or NH;

R<sub>2</sub> is =O;

R<sub>3</sub> and R<sub>4</sub> comprise:



R<sub>5</sub> is methylcyclopropyl; or  
a pharmaceutically acceptable salt thereof.

19. The method of claim 10, wherein the disease comprises an immune disorder,  
5 transplant rejection, allergy, inflammation, drug or alcohol abuse, diarrhea,  
cardiovascular disease, or respiratory disease.
20. The method of claim 10, wherein treating of disease comprises treating pain,  
protecting brain cells, or decreasing gastric secretion.

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